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BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No.	Applicant(s)
	10/646,565	MAGNAGHI ET AL.
	Examiner	Art Unit
	Ian N. Moore	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 01 November 2007.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-44 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15,17-31 and 33-44 is/are rejected.

7)☒ Claim(s) 16 and 32 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11-1-07 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 11-1-2007. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 7,11,17,20,23,27,33, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Boodaghians (US006965572B1).

Regarding Claim 1, Boodaghians discloses a method for detecting network configuration (see FIG. 3, Label Edge Router, LER A (also see FIG. 4) processing the methods/steps see FIG. 7-9; see col. 7, line 35-39; see col. 9, line 1-5) comprising:

identifying a remote target (see FIG. 3, LER B; see col. 5, line 16-46; ports 50-53 identifies/recognizes LER B and couples to it),

transmitting a forward packet series (see FIG. 7,S201, see FIG. 8, S303; see FIG. 9, S501; see col. 9, line 55-63; transmitting Inband Network Management Packets, INMPs periodically during a testing period) on a data path (see FIG. 3, over Bidirectional Traffic

Engineering Trunk, BTT) to the remote target (see FIG. 3, to LER B; see col. 7, line 60 to col. 8, line 22; see col. 9, line 25-65), and

receiving at least some packets from a reverse packet series (see FIG. 9, S502, see FIG. 3, receive loopbacked INMP packets) transmitted on the data path from the remote target (see FIG. 7, S202; see FIG. 8, S302; see col. 7, line 60 to col. 8, line 26; see col. 9, line 25-65; receiving loopbacked INMP packets over BTT back from LER B); and

determining forward path performance characteristics for transmission of the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; see FIG. 4, processing circuitry 65 evaluating predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP; see col. 5, line 16-46; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35),

determining reverse path performance characteristics for transmission of the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and

if the forward path performance characteristics and the reverse path performance characteristics indicate asymmetry on the data path, to generate an alert signaling a potential network misconfiguration of the data path (see FIG. 7, S205, see FIG. 8, S304; see col. 7, line 20-56; see col. 9, line 35-55; evaluating if transmit parameters and the received/loopback parameters are not equivalent or acceptable (i.e. tested parameter fail), an alarm/notification for failing connectivity and continuatively (i.e. misconfiguration) in the BTT).

Regarding Claim 4, Boodaghians discloses wherein the forward path performance characteristics and the reverse path performance characteristics each comprise a plurality of measurements each indicating performance of the data path for a particular time period (see col. 7, line 58 to col. 8, line 2; col. 8, line 20-35; see col. 9, line 40-65; transmit path QoS parameters and the received path QoS parameters over a BTT are measured over a predetermined period/time).

Regarding Claim 20, Boodaghians discloses wherein the forward path performance characteristics and the reverse path performance characteristics each comprise a plurality of measurements each indicating performance of the data path for a particular time period (see col. 7, line 58 to col. 8, line 2; col. 8, line 20-35; see col. 9, line 40-65; transmit path QoS parameters and the received path QoS parameters over a BTT are measured over a predetermined period/time).

Regarding Claim 36, Boodaghians discloses wherein the forward path performance characteristics and the reverse path performance characteristics each comprise a plurality of measurements each indicating performance of the data path for a particular time period (see col. 7, line 58 to col. 8, line 2; col. 8, line 20-35; see col. 9, line 40-65; transmit path QoS parameters and the received path QoS parameters over a BTT are measured over a predetermined period/time).

Regarding Claim 7, Boodaghians discloses the remote target is configured to transmit the reverse packet series in response to a test request message, the method further comprising transmitting the test request message to the remote target prior to transmitting the forward packet

series (see col. 7, line 43-65; transmitting "activate loopback" request INMP packet to target LER B to indicates that it has activated the loopback procedure before transmitting INMPs).

Regarding Claim 23, Boodaghians discloses the remote target is configured to transmit the reverse packet series in response to a test request message, the method further comprising transmitting the test request message to the remote target prior to transmitting the forward packet series (see col. 7, line 43-65; transmitting "activate loopback" request INMP packet to target LER B to indicates that it has activated the loopback procedure before transmitting INMPs).

Regarding Claim 11, Boodaghians discloses wherein the forward packet series comprises a plurality of packet bursts, each separated by a time constant (see col. 9, line 55-67; see col. 7, line 20-67; transmitting INMPs packets periodically/separated by every second per network management (NM) system).

Regarding Claim 27, Boodaghians discloses wherein the forward packet series comprises a plurality of packet bursts, each separated by a time constant (see col. 9, line 55-67; see col. 7, line 20-67; transmitting INMPs packets periodically/separated by every second per network management (NM) system).

Regarding Claim 17, Boodaghians discloses an analysis device (see FIG. 3, Label Edge Router, LER A; see FIG. 4) comprising:

a network interface (see FIG. 4, ports 50-53) operable to couple to and identify a remote target (see FIG. 3, LER B; see col. 5, line 16-46; ports 50-53 identifies/recognizes LER B and couples to it),

to transmit a forward packet series (see FIG. 7,S201, see FIG. 8, S303; see FIG. 9, S501; see col. 9, line 55-63; transmitting Inband Network Management Packets, INMPs periodically

during a testing period) on a data path (see FIG. 3, over Bidirectional Traffic Engineering Trunk, BTT) to the remote target (see FIG. 3, to LER B; see col. 7, line 60 to col. 8, line 22; see col. 9, line 25-65), and

to receive at least some packets from a reverse packet series (see FIG. 9, S502, see FIG. 3, receive loopbacked INMP packets) transmitted on the data path from the remote target (see FIG. 7, S202; see FIG. 8, S302; see col. 7, line 60 to col. 8, line 26; see col. 9, line 25-65; receiving loopbacked INMP packets over BTT back from LER B); and

a controller (see FIG. 4, processing circuitry 65; see col. 5, line 16-46) operable to determine forward path performance characteristics for transmission of the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35),

to determine reverse path performance characteristics for transmission of the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and

if the forward path performance characteristics and the reverse path performance characteristics indicate asymmetry on the data path, to generate an alert signaling a potential network misconfiguration of the data path (see FIG. 7, S205, see FIG. 8, S304; see col. 7, line 20-56; see col. 9, line 35-55; evaluating if transmit parameters and the received/loopback parameters are not equivalent or acceptable (i.e. tested parameter fail), an alarm/notification for failing connectivity and continuatively (i.e. misconfiguration) in the BTT).

Regarding Claim 33, Boodaghians discloses a computer readable medium (see FIG. 4, Memory 62) encoded with instruction (see FIG. 7-9, method/processes) for detecting network misconfiguration (see FIG. 3, Label Edge Router, LER A determining/detecting/ensuring continuity and connectivity between routers; see FIG. 4; col. 7, line 35-39; see col. 9, line 1-5;), the instruction operable when executed (see FIG. 4, processor 61) to perform a method steps comprising:

identifying a remote target (see FIG. 3, LER B; see col. 5, line 16-46; ports 50-53 identifies/recognizes LER B and couples to it),

transmitting a forward packet series (see FIG. 7,S201, see FIG. 8, S303; see FIG. 9, S501; see col. 9, line 55-63; transmitting Inband Network Management Packets, INMPs periodically during a testing period) on a data path (see FIG. 3, over Bidirectional Traffic Engineering Trunk, BTT) to the remote target (see FIG. 3, to LER B; see col. 7, line 60 to col. 8, line 22; see col. 9, line 25-65), and

receiving at least some packets from a reverse packet series (see FIG. 9, S502, see FIG. 3, receive loopbacked INMP packets) transmitted on the data path from the remote target (see FIG. 7, S202; see FIG. 8, S302; see col. 7, line 60 to col. 8, line 26; see col. 9, line 25-65; receiving loopbacked INMP packets over BTT back from LER B); and

determining forward path performance characteristics for transmission of the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; see FIG. 4, processing circuitry 65 evaluating predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP; see col. 5, line 16-46; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35),

determining reverse path performance characteristics for transmission of the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and

if the forward path performance characteristics and the reverse path performance characteristics indicate asymmetry on the data path, to generate an alert signaling a potential network misconfiguration of the data path (see FIG. 7, S205, see FIG. 8, S304; see col. 7, line 20-56; see col. 9, line 35-55; evaluating if transmit parameters and the received/loopback parameters are not equivalent or acceptable (i.e. tested parameter fail), an alarm/notification for failing connectivity and continuatively (i.e. misconfiguration) in the BTT).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 12,18,28,34, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boodaghians in view of McKee (US005477531A).

Regarding Claim 2, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters

of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose loss rate. However, McKee teaches a forward packet loss rate for the forward packet series (see FIG. 2, determining packet lost rate of transmit Test packets Tx (T in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67); a reverse packet loss rate for the reverse packet series (see FIG. 2, determining packet lost rate of receive Test Packets Rx (R in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide loss rate, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as packet rate to be determined; see McKee col. 1, line 50-65.

Regarding Claim 12, Boodaghians discloses each of the packet bursts comprises one or more packets separated by a time constant/period that can be increased or decreased depending desired of Network Management (NM); see col. 9, line 55-67; see col. 7, line 20-67).

Boodaghians does not explicitly disclose a second time constant. However, McKee teaches each of the packet bursts comprises one or more packets separated by a second time constant (see FIG. 2, various test packet interval t defined by the user; see col. 5, line 15 to col. 7, line 15). Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to provide a second time constant, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as interpacket interval period to be determined; see McKee col. 1, line 50-65.

Regarding Claim 18, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose loss rate. However, McKee teaches a forward packet loss rate for the forward packet series (see FIG. 2, determining packet lost rate of transmit Test packets Tx (T in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67); a reverse packet loss rate for the reverse packet series (see FIG. 2, determining packet lost rate of receive Test Packets Rx (R in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide loss rate, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as packet rate to be determined; see McKee col. 1, line 50-65.

Regarding Claim 28, Boodaghians discloses each of the packet bursts comprises one or more packets separated by a time constant/period that can be increased or decreased depending desired of Network Management (NM); see col. 9, line 55-67; see col. 7, line 20-67).

Boodaghians does not explicitly disclose a second time constant. However, McKee teaches each of the packet bursts comprises one or more packets separated by a second time constant (see FIG. 2, various test packet interval t defined by the user; see col. 5, line 15 to col. 7, line 15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second time constant, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as interpacket interval period to be determined; see McKee col. 1, line 50-65.

Regarding Claim 34, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose loss rate.

However, McKee teaches a forward packet loss rate for the forward packet series (see FIG. 2, determining packet lost rate of transmit Test packets Tx (T in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67); a reverse packet loss rate for the

reverse packet series (see FIG. 2, determining packet lost rate of receive Test Packets Rx (R in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide loss rate, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as packet rate to be determined; see McKee col. 1, line 50-65.

Regarding Claim 44, Boodaghians discloses an analysis device (see FIG. 3, Label Edge Router, LER A) processing a method (see FIG. 7-9, method) for detecting network misconfiguration (see col. 7, line 35-39; see col. 9, line 1-5; determining/detecting/ensuring continuity and connectivity between routers) comprising:

means for identifying (see FIG. 4, processing circuitry 65) a remote target (see FIG. 3, LER B); see col. 5, line 16-46;

means for transmitting (see FIG. 4, ports 50-53) a forward packet series (see FIG. 7,S201, see FIG. 8, S303; see col. 9, line 55-63; transmitting Inband Network Management Packets, INMPs periodically during a testing period) on a data path (see FIG. 3, over Bidirectional Traffic Engineering Trunk, BTT) to the remote target (see FIG. 3, to LER B; see col. 7, line 60 to col. 8, line 22; see col. 9, line 25-65);

means for receiving (see FIG. 4, ports 50-53) at least some packets from a reverse packet series (see FIG. 3, loopback INMPs) transmitted on the data path from the remote target (see FIG. 7, S202; see FIG. 8, S302; see col. 7, line 60 to col. 8, line 26; see col. 9, line 25-65; receiving loopbacked INMP packets over BTT back from LER B);

means for determining (see FIG. 4, processing circuitry 65) a forward packet parameter for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35),;

means for determining a reverse packet parameter for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35); and

means for, if the forward packet parameter and the reverse packet parameter differ by at least a threshold amount, generating an alert signaling a potential network misconfiguration of the data path (see FIG. 7, S205, see FIG. 8, S304; see col. 7, line 20-56; see col. 9, line 35-55; evaluating if transmit parameters and the received/loopback parameters are not equivalent or acceptable (i.e. tested parameter fail) by a predetermined/threshold, an alarm/notification for failing connectivity and continuatively (i.e. misconfiguration) in the BTT).

Boodaghians does not explicitly disclose loss rate. However, McKee teaches determining a forward packet loss rate for the forward packet series (see FIG. 2, determining packet lost rate of transmit Test packets Tx (T in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67);

determining a reverse packet loss rate for the reverse packet series (see FIG. 2, determining packet lost rate of receive Test Packets Rx (R in event list 51); see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67); and

if the forward packet loss rate and the reverse packet loss rate differ by at least a threshold amount (see FIG. 2, analyzing the event list 51 for transmit packets loss and receive packet for differed by a predefined/threshed value; see col. 5, line 15-50; see col. 7, line 1-35; see col. 8, line 23-27,55-67), generating an alert signaling a potential network misconfiguration of the data path (see FIG. 1, Input device 21 and Display 22 of test station; outputting the notification to display the test results to the user; see col. 7, line 30-35; see col. 8, line 26-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide loss rate, as taught by McKee in the system of Boodaghians, so that it would permit further network characterizes such as packet rate to be determined; see McKee col. 1, line 50-65.

6. Claims 3, 5, 19,21,35,37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boodaghians in view of Kahkoska (US006002671A).

Regarding Claim 3, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose throughput. However, Kahkoska teaches herein the forward path performance characteristics indicate a forward path throughput on the data path (see FIG. 2, downstream throughput of downstream path), and the reverse path performance characteristics indicate a reverse path throughput on the data path (see FIG. 2, upstream throughput of the upstream path); see col. 3, line 5-36; see col. 8, line 50 to col. 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide throughput, as taught by Kahkoska in the system of Boodaghians, so that it would provide measurement of throughput; see Kahkoska col. 2, line 30-50.

Regarding Claim 5, Boodaghians discloses prior to transmitting the forward packet series, transmitting a pre-test packet to the remote target and receiving a pre-test acknowledgment from the remote target (see col. 7, line 43-65; transmitting "activate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has activated the loopback procedure);

after transmitting the forward packet series, transmitting a post-test packet to the remote target and receiving a post-test acknowledgement from the remote target (see col. 10, line 45-61; transmitting "deactivate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has deactivated the loopback procedure); and

determining the results within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters by evaluating activate and

terminate INMPs acknowledgements; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35)).

Boodaghians does not explicitly disclose the number of packets.

However, it is well known in the art one must calculate the received packets between test activation period and test termination period in order to produce accurate test results. In particular, Kahkoska teaches determining the number of packets within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 3A-B, determining the number of received frames from upstream direction by comparing the packets received between generation acknowledgment message and reply acknowledgment message; see col. 6, line 15 to col. 7, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide determining number of packets, as taught by Kahkoska in the system of Boodaghians, so that it would provide measuring the number of received packets and upstream throughput; see Kahkoska col. 3, line 15-36.

Regarding Claim 19, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose throughput. However, Kahkoska teaches herein the forward path performance characteristics indicate a forward path throughput on the data path (see FIG. 2, downstream throughput of downstream path), and the reverse path performance characteristics indicate a reverse path throughput on the data path (see FIG. 2, upstream throughput of the upstream path); see col. 3, line 5-36; see col. 8, line 50 to col. 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide throughput, as taught by Kahkoska in the system of Boodaghians, so that it would provide measurement of throughput; see Kahkoska col. 2, line 30-50.

Regarding Claim 21, Boodaghians discloses prior to transmitting the forward packet series, transmitting a pre-test packet to the remote target and receiving a pre-test acknowledgment from the remote target (see col. 7, line 43-65; transmitting "activate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has activated the loopback procedure);

after transmitting the forward packet series, transmitting a post-test packet to the remote target and receiving a post-test acknowledgement from the remote target (see col. 10, line 45-61; transmitting "deactivate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has deactivated the loopback procedure); and

determining the results within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters by evaluating activate and

terminate INMPs acknowledgements; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35)).

Boodaghians does not explicitly disclose the number of packets. However, it is well known in the art one must calculate the received packets between test activation period and test termination period in order to produce accurate test results. In particular, Kahkoska teaches determining the number of packets within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 3A-B, determining the number of received frames from upstream direction by comparing the packets received between generation acknowledgment message and reply acknowledgment message; see col. 6, line 15 to col. 7, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide determining number of packets, as taught by Kahkoska in the system of Boodaghians, so that it would provide measuring the number of received packets and upstream throughput; see Kahkoska col. 3, line 15-36.

Regarding Claim 35, Boodaghians discloses the forward path performance characteristics indicate a forward packet parameters for the forward packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating predetermined/threshed transmitted/forward parameters of transmitted INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35), and the reverse path performance characteristics indicate a reverse packet parameters for the reverse packet series (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35).

Boodaghians does not explicitly disclose throughput. However, Kahkoska teaches herein the forward path performance characteristics indicate a forward path throughput on the data path (see FIG. 2, downstream throughput of downstream path), and the reverse path performance characteristics indicate a reverse path throughput on the data path (see FIG. 2, upstream throughput of the upstream path); see col. 3, line 5-36; see col. 8, line 50 to col. 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide throughput, as taught by Kahkoska in the system of Boodaghians, so that it would provide measurement of throughput; see Kahkoska col. 2, line 30-50.

Regarding Claim 37, Boodaghians discloses prior to transmitting the forward packet series, transmitting a pre-test packet to the remote target and receiving a pre-test acknowledgment from the remote target (see col. 7, line 43-65; transmitting "activate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has activated the loopback procedure);

after transmitting the forward packet series, transmitting a post-test packet to the remote target and receiving a post-test acknowledgement from the remote target (see col. 10, line 45-61; transmitting "deactivate loopback" INMP packet to target LER B and receiving an acknowledgment INMP packet from the LER B to indicates that the it has deactivated the loopback procedure); and

determining the results within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters by evaluating activate and

terminate INMPs acknowledgements; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35)).

Boodaghians does not explicitly disclose the number of packets. However, it is well known in the art one must calculate the received packets between test activation period and test termination period in order to produce accurate test results. In particular, Kahkoska teaches determining the number of packets within the reverse packet series based upon a comparison of the pre-test acknowledgment and the post-test acknowledgment (see FIG. 3A-B, determining the number of received frames from upstream direction by comparing the packets received between generation acknowledgment message and reply acknowledgment message; see col. 6, line 15 to col. 7, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide determining number of packets, as taught by Kahkoska in the system of Boodaghians, so that it would provide measuring the number of received packets and upstream throughput; see Kahkoska col. 3, line 15-36.

Regarding Claim 39, Boodaghians discloses the remote target is configured to transmit the reverse packet series in response to a test request message, the method further comprising transmitting the test request message to the remote target prior to transmitting the forward packet series (see col. 7, line 43-65; transmitting "activate loopback" request INMP packet to target LER B to indicates that it has activated the loopback procedure before transmitting INMPs).

7. Claims 8, 9,24,25,40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boodaghians in view of Li (US006741555B1).

Regarding Claim 8, Boodaghians discloses establishing a communication session with the remote target prior to transmitting the forward packet series (see col. 7, line 20 to col. 8, line 55; see col. 9, line 25-67; establishing a communication between LER A and LER B before sending INMP packets).

Boodaghians does not explicitly disclose transmission control protocol (TCP). However, establishing TCP/IP session is well known in the art. In particular, Li teaches establishing a transmission control protocol (TCP) communication session with the remote target prior to transmitting the forward packet series (see FIG. 1B, TCP packet; see FIG. 2, establishing TCP path connection over TCP module 224 between source node 210 and destination node 220; see col. 7, line 14-15; see col. 7, line 55 to col. 8, line 40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to establish TCP connection, as taught by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

Regarding Claim 9, Boodaghians discloses each packet within the forward packet series as set forth above in claim 1.

Boodaghians does not explicitly disclose a non-sequential TCP packet sequence number.

However, a non-sequential TCP packet sequence number is well known in the art. In particular, Li teaches a non-sequential TCP packet sequence number (see FIG. 1B, TCP sequence number; see FIG. 2, transmitting ECN messages with un-sequence TCP packet sequence upon congestion; see col. 7, line 14-15; see col. 7, line 55 to col. 9, line 20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide utilizing un-sequence TCP packet sequence number, as taught

by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

Regarding Claim 24, Boodaghians discloses establishing a communication session with the remote target prior to transmitting the forward packet series (see col. 7, line 20 to col. 8, line 55; see col. 9, line 25-67; establishing a communication between LER A and LER B before sending INMP packets).

Boodaghians does not explicitly disclose transmission control protocol (TCP). However, establishing TCP/IP session is well known in the art. In particular, Li teaches establishing a transmission control protocol (TCP) communication session with the remote target prior to transmitting the forward packet series (see FIG. 1B, TCP packet; see FIG. 2, establishing TCP path connection over TCP module 224 between source node 210 and destination node 220; see col. 7, line 14-15; see col. 7, line 55 to col. 8, line 40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to establish TCP connection, as taught by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

Regarding Claim 25, Boodaghians discloses each packet within the forward packet series as set forth above in claim 17.

Boodaghians does not explicitly disclose a non-sequential TCP packet sequence number.

However, a non-sequential TCP packet sequence number is well known in the art. In particular, Li teaches a non-sequential TCP packet sequence number (see FIG. 1B, TCP sequence number; see FIG. 2, transmitting ECN messages with un-sequence TCP packet sequence upon congestion; see col. 7, line 14-15; see col. 7, line 55 to col. 9, line 20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide utilizing un-sequence TCP packet sequence number, as taught by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

Regarding Claim 40, Boodaghians discloses establishing a communication session with the remote target prior to transmitting the forward packet series (see col. 7, line 20 to col. 8, line 55; see col. 9, line 25-67; establishing a communication between LER A and LER B before sending INMP packets).

Boodaghians does not explicitly disclose transmission control protocol (TCP). However, establishing TCP/IP session is well known in the art. In particular, Li teaches establishing a transmission control protocol (TCP) communication session with the remote target prior to transmitting the forward packet series (see FIG. 1B, TCP packet; see FIG. 2, establishing TCP path connection over TCP module 224 between source node 210 and destination node 220; see col. 7, line 14-15; see col. 7, line 55 to col. 8, line 40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to establish TCP connection, as taught by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

Regarding Claim 41, Boodaghians discloses each packet within the forward packet series as set forth above in claim 33.

Boodaghians does not explicitly disclose a non-sequential TCP packet sequence number.

However, a non-sequential TCP packet sequence number is well known in the art. In particular, Li teaches a non-sequential TCP packet sequence number (see FIG. 1B, TCP

sequence number; see FIG. 2, transmitting ECN messages with un-sequence TCP packet sequence upon congestion; see col. 7, line 14-15; see col. 7, line 55 to col. 9, line 20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide utilizing un-sequence TCP packet sequence number, as taught by Li in the system of Boodaghians, so that it would avoid congestion in the network; see Li col. 4, line 40-50.

8. Claim 10, 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boodaghians in view of Knauerhase (US006215774B1).

Regarding Claim 10, Boodaghians each packet within the forward packet series comprises an Internet control message protocol (ICMP) message (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose "request".

However, utilizing ICMP "request" is well known in the art as disclosed by RFC standard as RFC 792.

In particular, Knauerhase teaches each packet within the forward packet series comprises an Internet control message protocol (ICMP) request message (see col. 2, line 60 to col. 3, line 13; sending ICMP ping request messages).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ICMP "request" message, as taught by Knauerhase in the system of Boodaghians, so that it would dynamically determining the effective speed of a

communication link between network devices and without requiring changes to existing network; see Knauerhase col. 1, line 50-60.

Regarding Claim 26, Boodaghians each packet within the forward packet series comprises an Internet control message protocol (ICMP) message (see col. 3; line 3-7; ICMP message).

Boodaghians does not explicitly disclose "request".

However, utilizing ICMP "request" is well known in the art as disclosed by RFC standard as RFC 792.

In particular, Knauerhase teaches each packet within the forward packet series comprises an Internet control message protocol (ICMP) request message (see col. 2, line 60 to col. 3, line 13; sending ICMP ping request messages).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ICMP "request" message, as taught by Knauerhase in the system of Boodaghians, so that it would dynamically determining the effective speed of a communication link between network devices and without requiring changes to existing network; see Knauerhase col. 1, line 50-60.

Regarding Claim 42, Boodaghians each packet within the forward packet series comprises an Internet control message protocol (ICMP) message (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose "request".

However, utilizing ICMP "request" is well known in the art as disclosed by RFC standard as RFC 792.

In particular, Knauerhase teaches each packet within the forward packet series comprises an Internet control message protocol (ICMP) request message (see col. 2, line 60 to col. 3, line 13; sending ICMP ping request messages).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ICMP "request" message, as taught by Knauerhase in the system of Boodaghians, so that it would dynamically determining the effective speed of a communication link between network devices and without requiring changes to existing network; see Knauerhase col. 1, line 50-60.

9. Claim 13-15 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boodaghians in view of Hibbard (US 2001/0056503A1).

Regarding Claim 13, Boodaghians discloses each packet in the forward packet series has a specific size as set forth above, and ICMP ping packets (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose a size of 512 bits. However, ICMP packets have 64 bytes (i.e. 512 bits) is well know in the TCP/IP standards. In particular, Hibbard teaches each packet in the forward packet series has a size of 512 bits (see page 2, paragraph 21; ICMP packet has 64 bytes). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a ICMP packet with a size of 512 bits, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7; also by utilizing the standard packet size, it would also provide interoperability with other network devices.

Regarding Claim 14, Boodaghians discloses the forward packet series is communicated with protocol setting (see FIG. 4, processing circuitry 65) such that each packet in the reverse packet series has size (see col. 7, line 20-65; each transmit INMP packets is communicated with processing circuitry such that each received INMP also has the same size, and ICMP ping packets (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose a size of 512 bits. However, ICMP packets have 64 bytes (i.e. 512 bits) is well know in the TCP/IP standards. In particular, Hibbard teaches each packet in the forward packet series has a size of 512 bits (see page 2, paragraph 21; ICMP packet has 64 bytes). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a ICMP packet with a size of 512 bits, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7; also by utilizing the standard packet size, it would also provide interoperability with other network devices.

Regarding Claim 15, Boodaghians discloses the potential network misconfiguration signaled is an duplexity mismatch (see col. 7, line 35-39; see col. 9, line 1-5; network dis-continuity and dis-connectivity/duplexity between routers (i.e. duplexity mismatch) are tested by transmitting INMP packets).

Boodaghians does not explicitly disclose Ethernet. However, transmitting Ethernet ICMP packets to determine network is duplexity mismatch and misconfiguration are well know in the art. In particular, Hibbard teaches the potential network misconfiguration signaled is an Ethernet duplexity mismatch (see page 2, paragraph 17-24; Ethernet network errors/mismatches due to failures are signals by using ICMP packet). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to provide Ethernet mismatch/error, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7.

Regarding Claim 29, Boodaghians discloses each packet in the forward packet series has a specific size as set forth above, and ICMP ping packets (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose a size of 512 bits. However, ICMP packets have 64 bytes (i.e. 512 bits) is well know in the TCP/IP standards. In particular, Hibbard teaches each packet in the forward packet series has a size of 512 bits (see page 2, paragraph 21; ICMP packet has 64 bytes). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a ICMP packet with a size of 512 bits, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7; also by utilizing the standard packet size, it would also provide interoperability with other network devices.

Regarding Claim 30, Boodaghians discloses the forward packet series is communicated with protocol setting (see FIG. 4, processing circuitry 65) such that each packet in the reverse packet series has size (see col. 7, line 20-65; each transmit INMP packets is communicated with processing circuitry such that each received INMP also has the same size, and ICMP ping packets (see col. 3, line 3-7; ICMP message).

Boodaghians does not explicitly disclose a size of 512 bits. However, ICMP packets have 64 bytes (i.e. 512 bits) is well know in the TCP/IP standards. In particular, Hibbard teaches each packet in the forward packet series has a size of 512 bits (see page 2, paragraph 21; ICMP packet

has 64 bytes). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a ICMP packet with a size of 512 bits, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7; also by utilizing the standard packet size, it would also provide interoperability with other network devices.

Regarding Claim 31, Boodaghians discloses the potential network misconfiguration signaled is an duplexity mismatch (see col. 7, line 35-39; see col. 9, line 1-5; network dis-continuity and dis-connectivity/duplexity between routers (i.e. duplexity mismatch) are tested by transmitting INMP packets).

Boodaghians does not explicitly disclose Ethernet. However, transmitting Ethernet ICMP packets to determine network is duplexity mismatch and misconfiguration are well know in the art. In particular, Hibbard teaches the potential network misconfiguration signaled is an Ethernet duplexity mismatch (see page 2, paragraph 17-24; Ethernet network errors/mismatches due to failures are signals by using ICMP packet). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ethernet mismatch/error, as taught by Hibbard in the system of Boodaghians, so that it would minimize the overall downtime; see Hibbard page 1, paragraph 7.

Allowable Subject Matter

10. **Dependent claims 16 and 32** are objected to as set forth above in paragraph 3 and being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Examiner acknowledges that the applicant admission regarding claims 17 and 32, which states, "...applicants respectively submit that the use of "operable to" **require** a claimed aspect to actually be operable to perform the later recited functions and/or steps..." in page 13. Since the applicant admits that the recited functional/steps are required, the objection to claim 17 and 32 are withdrawn.

12. Examiner did not recall having an interview with "Juliet Mitchell Dirba" (an attorney for applicant) regarding 35 U.S.C. 101 rejection. However, the claims are amended to overcome rejection under 35 U.S.C. 101, and accordingly the rejection 35 U.S.C. 101 is withdrawn.

13. Applicant's arguments, regarding prior art rejection, filed 10-11-07 have been fully considered but they are not persuasive.

Regarding claims 1-15, 17-31, 33-44, the applicant argued that, "...Boodaghians fails disclose (1) determining forward path performance characteristics for transmission of the forward packet series (2) determining reverse path performance characteristics for transmission of the reverse packet series (3) if the forward path performance characteristics and the reverse path performance characteristics indicate asymmetry on the data path, to generate an alert ..." in pages 14-18.

In response to applicant's argument, the examiner respectfully disagrees with the argument above.

Boodaghians discloses (1) determining forward path performance characteristics for transmission of the forward packet series (**see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; see FIG. 4, processing circuitry 65 evaluating predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP; see col. 5, line 16-46; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35**),

(2) determining reverse path performance characteristics for transmission of the reverse packet series (**see FIG. 8, S302, see FIG. 7, S202; see FIG. 9, S503-504; evaluating received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP; see col. 8, line 5-35; see col. 9, line 25-65; see col. 10, line 5-35**), and

(3) if the forward path performance characteristics and the reverse path performance characteristics indicate asymmetry on the data path, to generate an alert signaling a potential network misconfiguration of the data path (**see FIG. 7, S205, see FIG. 8, S304; see col. 7, line 20-56; see col. 9, line 35-55; evaluating if transmit parameters and the received/loopback parameters are not equivalent or acceptable (i.e. tested parameter fail), an alarm/notification for failing connectivity and continuatively (i.e. misconfiguration) in the BTT**).

In summary, first, transmitting node (e.g. LER A) determined/evaluated predetermined/threshed transmitted/forward parameters (i.e. connectivity, continuatively, delay, or QoS) of transmitted INMP from LER A to LER B. Second, transmitting node (e.g. LER A) again determined/evaluated received/received parameters (i.e. connectivity, continuatively, delay, or QoS) of received INMP. Note that determination/evaluation of both

predetermined/threshed transmitted/forward parameters and received/received parameters are required in order to detect/determine "failing connectivity and continuatively" (i.e. misconfiguration), so that an alarm/notification can be generated for failing connectivity and continuatively. **One cannot determine/detect "failing connectivity and continuatively" in the particular path unless the transmitting parameters (i.e. forward path parameters) and received parameters (i.e. reverse path parameters) are compared/evaluated. Such "broadly" claimed concept is clearly disclosed by Boodaghians as set forth above.** In addition such "broadly" claimed concept is also based upon RFC standard (RFC-792) (see attached).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

INM

Ian N. Moore
Art Unit 2616

11-9-07

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600